216348US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :

STEVE DUNCAN ET AL : ATTN: APPLICATION DIVISION

SERIAL NO: NEW U.S. PCT APPLICATION :
(Based on PCT/JP01/03080)

FILED: HEREWITH :

FOR: METHOD OF COMPENSATING FOR SAMPLING FREQUENCY OFFSET IN AN OFDM RECEIVER, METHOD OF SYNCHRONISING AN OFDM RECEIVER, METHOD OF COMPENSATING FOR LOCAL OSCILLATOR FREQUENCY OFFSET IN AN OFDM RECEIVER AND OFDM RECEIVER :

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Prior to a first examination on the merits, please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

5. (Amended) A method as claimed in claim 1, wherein the separate Fourier Transform is a reduced Fourier Transform.

7. (Amended) A method as claimed in claim 1, including performing the compensation for the sampling frequency offset in dependence on phase values measured over a plurality of OFDM symbols.

8. (Amended) A method as claimed in claim 1, wherein the separate Fourier Transform is a partial Fourier Transform.

10. (Amended) A method as claimed in claim 1, wherein the phase values for said points are calculated only in response to selected samples of the received signal.

11. (Amended) A method as claimed in claim 1, wherein the compensation for the sampling frequency offset is performed by adjusting the sampling frequency.

12. (Amended) A method as claimed in claim 1, wherein the compensation for the sampling frequency offset is performed by controlling interpolation of the sampled signal.

13. A method of synchronising an OFDM receiver, the method comprising

compensating the sampling frequency offset of the OFDM receiver using a method as claimed in claim 1, and

compensating for a local oscillator frequency offset in dependence upon one of the phase values for at least one of said points.

18. (Amended) A method as claimed in Claim 14, wherein the separate Fourier Transform is a reduced Fourier Transform.

20. (Amended) A method as claimed in Claim 14, including performing the compensation of the local oscillator frequency offset in dependence on phase values measured over a plurality of OFDM symbols.

21. (Amended) A method as claimed in Claim 14, wherein the separate Fourier Transform is a partial Fourier Transform.

23. (Amended) A method as claimed in Claim 14, wherein the phase values for said point are calculated only in response to selected samples of the received signal.

24. (Amended) A method as claimed in Claim 14, wherein the compensation for the local oscillator frequency offset is performed by adjusting the local oscillator frequency.

25. (Amended) A method as claimed in claim 14, wherein the compensation for the local oscillator frequency offset is performed by phase rotation of received and sampled signals.

27. (Amended) An OFDM receiver operable to perform a synchronising operation using a method as claimed in claim 1.

REMARKS

Favorable consideration of this application, as presently amended, is respectfully requested.

The present Preliminary Amendment is submitted to place the above-identified application in more proper format under United States practice.

By the present Preliminary Amendment the claims have been amended to no longer recite any improper multiple dependencies.

The present application is believed to be in condition for a full and thorough examination on the merits. An early and favorable consideration of the present application is hereby respectfully requested.

Respectfully submitted,

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12-17-01

IN THE CLAIMS

Please amend the claims as follows:

5. (Amended) A method as claimed in [any preceding] claim 1, wherein the separate Fourier Transform is a reduced Fourier Transform.

7. (Amended) A method as claimed in [any preceding] claim 1, including performing the compensation for the sampling frequency offset in dependence on phase values measured over a plurality of OFDM symbols.

8. (Amended) A method as claimed in [any preceding] claim 1, wherein the separate Fourier Transform is a partial Fourier Transform.

10. (Amended) A method as claimed in [any preceding] claim 1, wherein the phase values for said points are calculated only in response to selected samples of the received signal.

11. (Amended) A method as claimed in [any preceding] claim 1, wherein the compensation for the sampling frequency offset is performed by adjusting the sampling frequency.

12. (Amended) A method as claimed in [any of claims] claim 1 [to 10], wherein the compensation for the sampling frequency offset is performed by controlling interpolation of the sampled signal.

13. (Amended) A method of synchronising an OFDM receiver, the method comprising

compensating the sampling frequency offset of the OFDM receiver using a method as claimed in [any preceding] claim 1, and

compensating for a local oscillator frequency offset in dependence upon one of the phase values for at least one of said points.

18. (Amended) A method as claimed in [any one of Claims] Claim 14 [to 17], wherein the separate Fourier Transform is a reduced Fourier Transform.

20. (Amended) A method as claimed in [any one of Claims] Claim 14 [to 20], including performing the compensation of the local oscillator frequency offset in dependence on phase values measured over a plurality of OFDM symbols.

21. (Amended) A method as claimed in [any one of Claims] Claim 14 [to 20], wherein the separate Fourier Transform is a partial Fourier Transform.

23. (Amended) A method as claimed in [any one of Claims] Claim 14 [to 22], wherein the phase values for said point are calculated only in response to selected samples of the received signal.

24. (Amended) A method as claimed in [any one of claims] Claim 14 [to 23], wherein the compensation for the local oscillator frequency offset is performed by adjusting the local oscillator frequency.

25. (Amended) A method as claimed in [any one of claims] claim 14 [to 23], wherein the compensation for the local oscillator frequency offset is performed by phase rotation of received and sampled signals.

27. (Amended) An OFDM receiver operable to perform a synchronising operation using a method as claimed in [any preceding] claim 1.